

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 62206570  
PUBLICATION DATE : 11-09-87

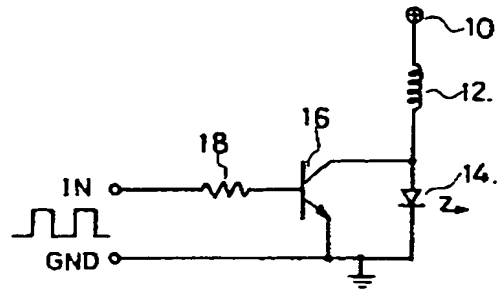
APPLICATION DATE : 07-03-86  
APPLICATION NUMBER : 61050022

APPLICANT : CITIZEN WATCH CO LTD;

INVENTOR : HASHIMOTO NOBUYUKI;

INT.CL. : G03G 15/04 B41J 3/21 H01S 3/096

TITLE : LASER DIODE PULSE LIGHTING  
CIRCUIT



**ABSTRACT :** PURPOSE: To obtain a laser diode pulse lighting circuit where the ringing of an optical output does not occur, by inserting an inductance element to the anode side of a laser diode directly or together with a constant current source consisting of transistors.

**CONSTITUTION:** An inductance 12 is added to the anode side of a laser diode 14 to prevent the ringing of the optical output waveform. If the forward current conducted to the laser diode 14 from a power plus terminal 10 is changed, an induced electromotive force in the opposite direction of this change of the forward current is generated by the inductance 12 to cancel the momentary flow of an excess current. The change of the forward current is reduced as the magnitude of the forward current approaches a certain value, and as the result, the induced electromotive force is reduced and a certain current flows. If a transistor 16 is made conductive to reduce quickly the forward current conducted to the laser diode 14, the optical output having a stable rectangular waveform is always generated by the similar effect.

**COPYRIGHT:** (C)1987,JPO&Japio

BEST AVAILABLE COPY